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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/364,241	07/29/1999	ROBERT P. PARKER	02103/349001	9138

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CHARLES HEIKEN  
FISH & RICHARDSON  
225 FRANKLIN STREET  
BOSTON, MA 021102804

EXAMINER

TRAN, KHANH C

ART UNIT

PAPER NUMBER

2631

DATE MAILED: 08/14/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/364,241

Applicant(s)

ROBERT P. PARKER

Examiner

Khanh Tran

Art Unit

2631

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 10 May 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-15 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

### DETAILED ACTION

1. The Amendment A filed on May 10, 2002. Claims 1-15 are pending in this Office action.

#### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-3, 4-7, 8-10, 11 and 13 are rejected under 35 U.S.C. 102(b) as being anticipated by Ikeguchi U.S. Patent 4,220,922.

Regarding claims 1, 10 and 11, Ikeguchi discloses, in figure 1, column 3 line 6 through column 4 line 6, a preset tuner including: a high frequency amplifier 2 coupled to an antenna 1 for selectively amplifying a high frequency signal transmitted by a broadcasting station; a frequency mixer for mixing the amplified high frequency signal from the high frequency amplifier 2 with a local oscillation signal for converting the high frequency signal into an intermediate frequency signal; an intermediate frequency amplifier 4 for amplifying the intermediate frequency signal from the mixer 3 and outputting to a terminal 5 for subsequent stage detecting circuit; a preset circuit 7; a voltage correcting circuit 18 comprising a frequency comparator 22 for comparing the frequency of a reference oscillator 20 with the frequency of the intermediate frequency signal from a tuner, which comprises the mixer 3 and a voltage controlled oscillator 6, to

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provide a correction control signal to a digital-to-analog converter 11, which controls the VCO 6 to correct any deviation of the intermediate frequency of the tuner.

Regarding claims 2 and 3, the objection of claims 2 and 3 has been withdrawn in this Office action, Ikeguchi recites some limitations of claims 2 and 3 in claim 1. Ikeguchi further discloses the preset circuit 7 including a storage circuit 10 comprising a channel selecting switch 9, including a plurality of preset push buttons 9a, 9b, 9c, ... 9n, a memory for storing a plurality of digital data representations representative of the local oscillation frequencies corresponding to the channels to be preset.

Regarding claims 4-7, the objection of claim 4-7 has been withdrawn in this Office action. The function of VCO 6 is to tune to a frequency within a channel frequency range by adding a frequency offset that is any frequency selected within a channel frequency range. Therefore, adding a frequency offset to the received frequency is inherent, and the frequency offset could be automatically an intermediate frequency of the receiver.

Regarding claim 8, the objection of claim 8 has been withdrawn in this Office action. Ikeguchi recites some limitations of claim 8 in claim 1. It's inherently that the reference frequency, also known center frequency, of the channels is approximately centered in the channel frequency range.

Regarding claims 9 and 13, the objection of claim 9 has been withdrawn in this Office action. Ikeguchi recites some limitations of claim 9 in claim 1. The mere selection of frequency range that is not an inventive feature could not be patentable since the preset tuner could be tuned to any range of frequencies at design.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ikeguchi U.S. Patent 4,220,922 as applied to claim 11 above, and further in view of Saito U.S. Patent 5,781,851.

Regarding claim 12, the objection of claim 12 has been withdrawn in this Office action. Ikeguchi recites some limitations of claim 12 in claim 11. Utilizing a phase-locked loop (PLL) in conjunction with a voltage-controlled oscillator is well known in the art. Saito teaches in figure 1 and figure 5, a PLL circuit 7 generates a tuned voltage based on a predetermined reference frequency from a frequency selection circuit 8 to control a VCO circuit 6.

4. Claims 14 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ikeguchi U.S. Patent 4,220,922 as applied to claim 11 above, and further in view of Koyama U.S. Patent 5,457,816.

Regarding claim 14, Ikeguchi recites some limitations of claim 14 in claim 11, but fails to disclose a microprocessor in the frequency controller. Koyama teaches in figure 1 a frequency modulation (FM) receiver 1 connected to antenna 9 for receiving an audio frequency. Koyama further discloses a microprocessor-based controller 4 controlling the

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tuning of FM receiver 1 and the volume of the demodulated AF signal. It's evident that a microprocessor-based controller automates and speeds up the tuning process and performs other processing tasks more efficiently. Therefore, it would have been obvious for one of ordinary skill to modify Ikeguchi's tuner to include microprocessor-based frequency controller as taught by Koyama.

Regarding claim 15, using the same argument as in claims 4-7 above.

### ***Conclusion***

5. The prior art made of record and not relied upon could be considered pertinent to applicant's disclosure:

Mellot U.S. Patent 5,850,164 & U.S. Patent 5,640,126 discloses a FM demodulation and frequency tuning for a phase-locked loop.

Gamgee et al. U.S. Patent 5,134,720 discloses a signal locating apparatus.

Hiben et al. U.S. Patent 5,465,410 discloses a method andan apparatus for automatic frequency and bandwidth control.

Malinowski et al. U.S. Patent 4,384,365 discloses a superheterodyne receiver frequency tracking circuit.

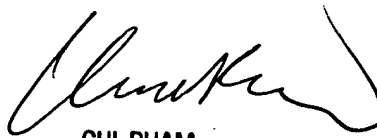
6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Khanh Tran whose telephone number is 703-305-2384. The examiner can normally be reached on Monday - Friday from 08:00 AM - 04:00 PM.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chi Pham can be reached on 703-305-4378. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9314 for regular communications and 703-872-9314 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-3800.

KCT  
August 7, 2002

  
CHI PHAM  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2600 